

AMENDMENTS TO THE CLAIMS

Listing of claims:

1. (Previously Presented) A method comprising:

receiving a data packet comprising a data packet identifier;

identifying a destination port corresponding to the data packet identifier from a first routing table, wherein there is a first relationship between the data packet identifier and the destination port in the first routing table; and

transmitting the data packet via a transmitting port corresponding to the destination port based on a second relationship between the destination port and the transmitting port in a second routing table, wherein the transmitting port is used to transmit other data packets regardless of whether a failure is associated with the destination port.

2. (Currently Amended) The method according to Claim 1, wherein transmitting the data packet via a transmitting port corresponding to the destination port based on a second relationship between the destination port and the transmitting port in a second routing table comprises:

searching out the transmitting port corresponding to the destination port according to the second relationship; and

transmitting the data packet via the transmitting port,

wherein each destination port appears only once in the second routing table.

3. (Currently Amended) The method according to Claim 1, wherein the order of the second relationship is set according to the sequence of the port numbers of the destination port, and wherein at least one of the transmitting ports in the second routing table is associated with a plurality of the destination ports when the failure is associated with one of the plurality of the destination ports.

4. - 6. (Canceled)

7. (Previously Presented) A network device, comprising:

a processor;

a first routing unit; and

a second routing unit,

wherein the processor is configured to communicate with the first routing unit and the second routing unit,

wherein the first routing unit is configured to save a first relationship between a data packet identifier and a destination port in a first routing table, and identify the destination port corresponding to the data packet identifier from the first routing table after receiving a data packet, and

wherein the second routing unit is configured to save a second relationship between the destination port and a transmitting port in a second table, and transmit the data packet via the transmitting port corresponding to the destination port based on the second relationship.

8. (Canceled)

9. (Previously Presented) The network device according to Claim 7, wherein the second routing unit is further configured to search out the transmitting port corresponding to the destination port according to the second relationship.

10. - 18. (Canceled)

19. (Previously Presented) The method according to Claim 1, wherein the port number of the transmitting port is set to a port number of the destination port in the second table when the transmitting port is operating normally.

20. (Previously Presented) The method according to Claim 19, wherein when there is a service failure in any destination port, the transmitting port corresponding to the fault destination port is modified into a backup port of the fault destination port.

21. (Previously Presented) The method according to Claim 20, wherein each destination port appears only once in the second table.

22. (Previously Presented) The method according to Claim 21, wherein the destination port appears a plurality of times in the first routing table.

23. (Previously Presented) The method according to Claim 22, wherein the first routing table is not modified when there is a service failure in any destination port.

24. (Previously Presented) The method according to Claim 23, wherein the data packet is not transmitted on the first transmitting port when a failure occurs in the first transmitting port.

25. (Previously Presented) The network device according to Claim 7, wherein the port number of the transmitting port is set to a port number of the destination port in the second table when the transmitting port is operating normally.

26. (Previously Presented) The network device according to Claim 7, wherein when there is a service failure in any destination port, the transmitting port corresponding to the fault destination port is modified into a backup port of the fault destination port.

27. (Previously Presented) The method according to Claim 7, wherein each destination port appears only once in the second table.

28. (Previously Presented) The network device according to Claim 7, wherein the order of the second relationship is set according to the sequence of the port numbers of the destination port.

29. (Previously Presented) The network device according to Claim 7, wherein the processor is configured to monitor each destination port in real time and modify the transmitting port corresponding to the fault destination port into a backup port of the fault destination port when a service failure is found in the destination port.

30. (Previously Presented) The network device according to Claim 7, wherein the transmitting port is used to transmit other data packets regardless of whether a failure is associated with the destination port.

31. (Previously Presented) The network device according to Claim 7, wherein the first routing table is not modified when there is a service failure in any destination port.

32. (Previously Presented) The network device according to Claim 7, wherein the destination port appears a plurality of times in the first routing table.

33. (Previously Presented) The network device according to Claim 7, wherein the data packet is not transmitted on the first transmitting port when a failure occurs in the first transmitting port.

34. (Previously Presented) A device comprising:

a first routing unit configured to save a first relationship between a data packet identifier and a destination port in a first routing table; and

a second routing unit configured to save a second relationship between the destination port and a transmitting port in a second routing table.

35. (Currently Amended) The device according to Claim 34, wherein the second routing unit is further configured to search out the transmitting port corresponding to the destination port according to the second relationship, wherein the transmitting port is used to transmit other data packets regardless of whether a failure is associated with the destination port, wherein each destination port appears only once in the second routing table, and wherein at least one of the transmitting ports in the second routing table is associated with a plurality of the destination ports when the failure is associated with one of the plurality of the destination ports.